Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A catalyst composition for polymerization of addition polymerizable monomers comprising:

a) a transition metal complex ~~capable of being activated for polymerization of addition polymerizable monomers~~ corresponding to the formula: $L_tMX_pX'_q$,

wherein: M is a metal of Group 4 of the Periodic Table of the Elements having an oxidation state of +2, +3 or +4, bound in an η^5 bonding mode to one or more L groups;

L independently each occurrence is a cyclopentadienyl-, indenyl-, tetrahydroindenyl-, fluorenyl-, tetrahydrofluorenyl-, or octahydrofluorenyl- group optionally substituted with from 1 to 8 substituents independently selected from the group consisting of hydrocarbyl, halo, halohydrocarbyl, aminohydrocarbyl, hydrocarbyloxy, dihydrocarbylamino, dihydrocarbylphosphino, silyl, aminosilyl, hydrocarbyloxysilyl, and halosilyl groups containing up to 20 non-hydrogen atoms, or further optionally two such L groups may be joined together by a divalent substituent selected from hydrocarbadiyl, halohydrocarbadiyl, hydrocarbyleneoxy, hydrocarbyleneamino, siladiyl, halosiladiyl, and divalent aminosilane groups containing up to 20 non-hydrogen atoms;

X independently each occurrence is a monovalent or polyvalent anionic ligand group having one or more shared or donative bonds to M, and optionally one or more shared or donative bonds to one or more L groups, said X containing up to 60 nonhydrogen atoms;

X' independently each occurrence is a neutral Lewis base ligating compound, having up to 20 atoms;

t, p, and q are 0, 1 or 2;

b) an activator compound ~~able to render the transition metal complex catalytically active for polymerization of addition polymerizable monomers~~; and

c) a Group 13 metal compound corresponding to the formula:

$$R^aM(N(R^b)_2)_2 \text{ (1)} \quad \text{or} \quad \begin{array}{c} R^d\text{—}N(R^b) \\ | \quad\quad | \\ R^c_2M \quad MR^c_2 \end{array} \text{ (2)};$$

wherein,

M, independently each occurrence is a group 13 metal;

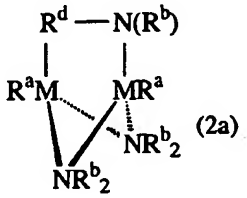
R^a is a hydrocarbyl, halocarbyl, halohydrocarbyl, tri(hydrocarbyl)silyl, or tri(hydrocarbyl)silyl- substituted hydrocarbyl radical of from 1 to 20 carbon, silicon or mixtures of carbon and silicon atoms;

R^b independently each occurrence is a C_{1-30} hydrocarbyl group;

R^c independently each occurrence is selected from the group consisting of hydrogen, R^a, $-NR^b_2$, and halo- or di(C_{1-10} hydrocarbyl)amino- substituted hydrocarbyl groups, and optionally one or more R^c groups may be shared by both metal centers, M, in the form of a μ-bridged structure; and

R^d, is a divalent, anionic ligand group of up to 30 atoms, not counting hydrogen.

2. (original) A catalyst composition according to claim 1 wherein the Group 13 component corresponds to the formula $R^1Al(NR^2_2)_2$ wherein R^1 is C_{1-4} alkyl, and R^2 independently each occurrence is C_{6-20} aryl, or to the formula:



(2a)

wherein R^a is C_{1-4} alkyl, R^b is C_{6-20} aryl, and R^d is C_{6-20} arylene.

3. (original) A catalyst composition according to claim 2 wherein the Group 13 component is bis(ethylaluminum)-1-phenylene-2-(phenyl)amido μ-bisdiphenylamide.

4. (original) A catalyst composition according to claim 1 wherein the molar ratio of metal complex to component b) is from 1:1 to 1:50.

5. (original) A catalyst composition according to claim 1 wherein the activating cocatalyst comprises trispentafluorophenylborane, N-methyl-N,N-dioctadecylammonium tetrakis(pentafluorophenyl)borate, or bis-C_{14-18}alkyl methylammonium tetrakis(pentafluorophenyl)borate.

6. (original) A process for polymerization of addition polymerizable monomers or mixtures thereof comprising contacting said monomer or mixture of monomers with a catalyst system comprising the catalyst composition of claim 1 under addition polymerization conditions.

7. (original) The process of claim 6 wherein the addition polymerizable monomer is a C_{2-20} α-olefin or a mixture thereof.

8. (original) The process of claim 7 wherein ethylene and styrene are copolymerized.